

1 ATGCCCGCTGGCATGGCCCGGCGCTGCGGCCCCGTGGCGCTGCTCCTTGG 50  
||||| ||| |||||||| ||| ||| ||| |||||||| |||  
1 ATGCTGGCTTGCATGGCCGGGCACTCCAATCAATGGCGCTGTTC...AG 47  
51 CTTCCGGCCTCCTCCGGCTGTGCTCAGGGGTGTGGGGTACGGATACAGAGG 100  
||||| |||| || |||||||||||||||| ||| ||| ||| |||||||  
48 CTTCAGCCTTCTTTGGCTGTGCTCAGGGGTTTGGGAAGTACACAGAGG 97  
101 AGCGGCTGGTGGAGCATCTCCTGGATCCTTCCCGCTACAACAAGCTTATC 150  
||||||| ||||||||||||| ||| ||||| ||||||||| ||||||||| |||  
98 AGCGGCTAGTGGAGCATCTCTTAGATCCCTCCCGCTATAACAAGCTGATT 147  
151 CGCCCAGCCACCAATGGCTCTGAGCTGGTGACAGTACAGCTTATGGTGTG 200  
|| ||||| || || ||||||||||||||||| ||||||||| ||||| |||  
148 CGTCCAGCTACTAACGGCTCTGAGCTGGTGACTGTACAGCTCATGGTATC 197  
201 ACTGGCCCAGCTCATCAGTGTGCATGAGCGGGAGCAGATCATGACCACCA 250  
| |||| ||||||||| ||||||||| ||||||||||||||||||||| |||  
198 ATTGGCTCAGCTCATTAGTGTGCACGAGCGGGAGCAGATCATGACCACCA 247  
251 ATGTCTGGCTGACCCAGGAGTGGGAAGATTATCGCCTCACCTGGAAGCCT 300  
||||||||||||||||||||||||||| ||||||||| ||||||||| |||  
248 ATGTCTGGCTGACCCAGGAGTGGGAAGATTACCGCCTCACATGGAAGCCT 297  
301 GAAGAGTTTGACAACATGAAGAAAGTTCGGCTCCCTTCCAAACACATCTG 350  
|| || || ||||| ||||||||||||| ||||||||||||||||||||| |||  
298 GAGGACTTCGACAATATGAAGAAAGTCCGGCTCCCTTCCAAACACATCTG 347  
351 GCTCCCAGATGTGGTCCTGTACAACAATGCTGACGGCATGTACGAGGTGT 400  
||||||||||||||| || ||||||||||||||||||||||||| ||| |  
348 GCTCCCAGATGTGGTTCTATACAACAATGCTGACGGCATGTACGAAGTCT 397  
401 CCTTCTATTCCAATGCCGTGGTCTCCTATGATGGCAGCATCTTCTGGCTG 450  
||||||||||||||| ||||||||||||||||||||||||| |||||  
398 CCTTCTATTCCAATGCTGTGGTCTCCTATGATGGCAGCATCTTTTGGCTA 447  
451 CCGCCTGCCATCTACAAGAGTGCATGCAAGATTGAAGTAAAGCACTTCCC 500  
|| ||||||||||||||||| ||||||||| ||| |||||||||||||  
448 CCACCTGCCATCTACAAGAGTGCATGCAAGATTGAGGTGAAGCACTTCCC 497  
501 ATTTGACCAGCAGAAGTGCACCATGAAGTTCCGTTTCGTGGACCTACGACC 550  
||||||||||||||| ||||||||||||| || ||| |||||||||||||  
498 ATTTGACCAGCAGAATTGCACCATGAAGTTTCGCTCATGGACCTACGACC 547  
551 GCACAGAGATCGACTTGGTGTGAAGAGTGAGGTGGCCAGCCTGGACGAC 600  
| || ||||| ||| ||||||| || ||||| ||||||||| ||||| |||  
548 GTAATGAGATTGACCTGGTGTCAAAAGTGATGTGGCCAGTCTGGATGAC 597  
601 TTCACACCTAGTGGTGAGTGGGACATCGTGGCGCTGCCGGGCCGCGGCAA 650  
||||||| || || ||||||||| || ||||| ||||| ||||| |||||  
598 TTCACACCCAGCGGGGAGTGGGACATCATCGCACTGCCAGGCCGACGCAA 647  
651 CGAGAACCCCGACGACTCTACGTACGTGGACATCACGTATGACTTCATCA 700  
||||||| ||||||||| || || ||||||||| ||||||||| |||||  
648 CGAGAACCCAGACGACTCCACCTATGTGGACATCACCTATGACTTCATCA 697

701 TTCGCCGCAAGCCGCTCTTCTACACCATCAACCTCATCATCCCCCTGTGTG 750  
 698 TTCGTCGCAAACCACTCTTCTACACTATCAACCTCATCATCCCCCTGCGTA 747  
 751 CTCATCACCTCGCTAGCCATCCTTGTCTTCTACCTGCCATCCGACTGTGG 800  
 748 CTCATCACCTCGCTGGCCATCCTGGTCTTCTACCTGCCCTCAGACTGTGG 797  
 801 CGAGAAGATGACGTTGTGCATCTCAGTGCTGCTGGCGCTCACGGTCTTCC 850  
 798 TGAAAAGATGACACTTTGTATTTCTGTGCTGCTAGCACTCACGGTGTTCC 847  
 851 TGCTGCTCATCTCCAAGATCGTGCCTCCCACCTCCCTCGACGTGCCGCTC 900  
 848 TGCTGCTCATCTCCAAGATTGTGCCTCCCACCTCCCTCGATGTACCGCTG 897  
 901 GTCGGCAAGTACCTCATGTTACCATGGTGCTTGTACCTTCTCCATCGT 950  
 898 GTGGGCAAGTACCTCATGTTTACCATGGTGCTAGTCACCTTCTCCATCGT 947  
 951 CACCAGCGTGTGCGTGCTCAACGTGCACCACCGCTCGCCACACGCACA 1000  
 948 CACCAGCGTGTGTGTGCTCAATGTGCACCACCGCTCGCTACCACGCACA 997  
 1001 CCATGGCGCCCTGCGTGAAGGTGCTCTTCTTGAGAAAGCTGCCCGCGCTG 1050  
 998 CCATGGCGCCCTGCGTCAAGGTGCTCTTCTTGAGAAAGCTGCCACCGCTG 1047  
 1051 CTCTTCATGCAGCAGCCACGCCATCATTGCGCCCGTCAGCGCCTGCGCT 1100  
 1048 CTCTTCTGCAGCAGCCACGCCACCGCTGTGCACGTACGCTCTGCGCTT 1097  
 1101 GCGGCGACGCCAGCGTGAGCGCGAGGGCGCTGGAGCCCTCTTCTTCCGCG 1150  
 1099 GAGGAGGCGCCAGCGAGAGCGTGAGGGC...GAGGCGGTTTTCTTCCGTG 1144  
 1151 AAGCCCCAGGGGCGGACTCCTGCACGTGCTTCGTCAACCGCGCGTCGGTG 1200  
 1145 AAGGTCTTGCGGCTGACCCATGTACCTGCTTTGTCAACCCTGCATCAGTG 1194  
 1201 CAGGGGTTGGCCGGGGCCTTCGGGGCTGAGCCTGCACCAAGTGGCGGGGCC 1250  
 1195 CAGGGCTTGGCTGGGGCTTTCCGAGCTGAGCCCACTGCA...GCCGGGCC 1241  
 1251 CGGGCGCTCAGGGGAGCCGTGTGGCTGTGGCCTCCGGGAGGCGGTGGACG 1300  
 1242 GGGGCGCTCTGTGGGGCCATGCAGCTGTGGCCTCCGGGAAGCAGTGGATG 1291  
 1301 GCGTGCGCTTCATCGCAGACCACATGCGGAGCGAGGACGATGACCAGAGC 1350  
 1292 GCGTACGCTTCATTGCGGACCACATGCGAAGTGAGGATGATGACCAGAGT 1341  
 1351 GTGAGTGAGGACTGGAAGTACGTGCCATGGTGATCGACCGCCTCTTCTT 1400  
 1342 GTGAGGGGAGGACTGGAATACGTTGCCATGGTGATCGACCGCCTGTTCTT 1391

1401 CTGGATCTTTGTCTTTGTCTGTGTCTTTGGCACCATCGGCATGTTCTGC 1450  
|||||  
1392 GTGGATCTTTGTCTTTGTCTGTGTCTTTGGGACCGTCGGCATGTTCTGC 1441  
1451 AGCCTCTCTTCCAGAACTACACCACCACCACCTTCCTCCACTCAGACCAC 1500  
|||||  
1442 AGCCTCTCTTCCAGAACTACACTGCCACTACCTTCCTCCACCCTGACCAC 1491  
1501 TCAGCCCCCAGCTCCAAGTGA 1521  
|||||  
1492 TCAGCTCCCAGCTCCAAGTGA 1512

(4)

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1 ATGCCCCTGGCATGGCCCGGCGCTGCGGCCCGTGGCGCTGCTCCTTGG 50  
1 ATGCTGGCTTGCATGGCCGGGCACTCCAATCAATGGCGCTGTTC...AG 47  
51 CTTCCGGCCTCCTCCGGCTGTGCTCAGGGGTGTGGGGTACGGATACAGAGG 100  
48 CTTCAGCCTTCTTTGGCTGTGCTCAGGGGTTTTGGGAAGTACACAGAGG 97  
101 AGCGGCTGGTGGAGCATCTCCTGGATCCTTCCCGCTACAACAAGCTTATC 150  
98 AGCGGCTAGTGGAGCATCTCTTAGATCCCTCCCGCTATAACAAGCTGATT 147  
151 CGCCCAGCCACCAATGGCTCTGAGCTGGTGACAGTACAGCTTATGGTGTG 200  
148 CGTCCAGCTACTAACGGCTCTGAGCTGGTGACTGTACAGCTCATGGTATC 197  
201 ACTGGCCCAGCTCATCAGTGTGCATGAGCGGGAGCAGATCATGACCACCA 250  
198 ATTGGCTCAGCTCATTAGTGTGCACGAGCGGGAGCAGATCATGACCACCA 247  
251 ATGTCTGGCTGACCCAGGAGTGGGAAGATTATCGCCTCACCTGGAAGCCT 300  
248 ATGTCTGGCTGACCCAGGAGTGGGAAGATTACCGCCTCACATGGAAGCCT 297  
301 GAAGAGTTTGACAACATGAAGAAAGTTCGGCTCCCTTCCAAACACATCTG 350  
298 GAGGACTTCGACAATATGAAGAAAGTCCGGCTCCCTTCCAAACACATCTG 347

FIG. 9a-1

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351 GCTCCCAGATGTGGTCCTGTACAACAATGCTGACGGCATGTACGAGGTGT 400  
|||||  
348 GCTCCCAGATGTGGTTCTATACAACAATGCTGACGGCATGTACGAAGTCT 397  
401 CCTTCTATTCCAATGCCGTGGTCTCCTATGATGGCAGCATCTTCTGGCTG 450  
|||||  
398 CCTTCTATTCCAATGCTGTGGTCTCCTATGATGGCAGCATCTTTTGGCTA 447  
451 CCGCCTGCCATCTACAAGAGGCGCATGCAAGATTGAAGTAAAGCACTTCCC 500  
||||| SphI  
448 CCACCTGCCATCTACAAGAGTGCATGCAAGATTGAGGTGAAGCACTTCCC 497  
501 ATTTGACCAGCAGAACTGCACCATGAAGTTCCGTTTCGTGGACCTACGACC 550  
|||||  
498 ATTTGACCAGCAGAAATTGCACCATGAAGTTTCGCTCATGGACCTACGACC 547  
551 GCACAGAGATCGACTTGGTGCTGAAGAGTGAGGTGGCCAGCCTGGACGAC 600  
|||||  
548 GTACTGAGATTGACCTGGTGCTCAAAAGTGATGTGGCCAGTCTGGATGAC 597  
601 TTCACACCTAGTGGTGAGTGGGACATCGTGGCGCTGCCGGGCGCGGCAA 650  
|||||  
598 TTCACACCCAGCGGGGAGTGGGACATCATCGCACTGCCAGGCCGACGCAA 647  
651 CGAGAACCCCGACGACTCTACGTACGTGGACATCACGTATGACTTCATCA 700  
|||||  
648 CGAGAACCCAGACGACTCCACCTATGTGGACATCACCTATGACTTCATCA 697

FIG.9a-2

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701 TTCGCCGCAAGCCGCTCTTCTACACCATCAACCTCATCATCCCCTGTGTG 750  
|||||  
698 TTCGTCGCAAACCACTCTTCTACACTATCAACCTCATCATCCCCTGCGTA 747  
751 CTCATCACCTCGCTAGCCATCCTTGTCTTCTACCTGCCATCCGACTGTGG 800  
|||||  
748 CTCATCACCTCGCTGGCCATCCTGGTCTTCTACCTGCCCTCAGACTGTGG 797  
801 CGAGAAGATGACGTTGTGCATCTCAGTGCTGCTGGCGCTCACGGTCTTCC 850  
|||||  
798 TGAAAAGATGACACTTTGTATTTCTGTGCTGCTAGCACTCACGGTGTTCC 847  
851 TGCTGCTCATCTCCAAGATCGTGCCTCCCACCTCCCTCGACGTGCCGCTC 900  
|||||  
848 TGCTGCTCATCTCCAAGATTGTGCCTCCCACCTCCCTCGATGTACCGCTG 897  
901 GTCGGCAAGTACCTCATGTTACCATGGTGCTTGTCACCTTCTCCATCGT 950  
|||||  
898 GTGGGCAAGTACCTCATGTTTACCATGGTGCTAGTCACCTTCTCCATCGT 947  
951 CACCAGCGTGTCGTGCTCAACGTGCACCACCGCTCGCCCACCACGCACA 1000  
|||||  
948 CACCAGCGTGTCGTGCTCAATGTGCACCACCGCTCGCCTACCACGCACA 997  
1001 CCATGGCGCCCTGGGTGAAGGTCGTCTTCCTGGAGAAGCTGCCCCGCGCTG 1050  
|||||  
998 CCATGGCCCCCTGGGTCAAGGTGGTCTTCCTGGAGAAGCTGCCCACCCTG 1047

FIG. 9b-1

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1051 CTCTTCATGCAGCAGCCACGCCATCATTGCGCCCGTCAGCGCCTGCGCCT 1100  
|||||  
1048 CTCTTCCTGCAGCAGCCACGCCACCGCTGTGCACGTCAGCGTCTGCGCTT 1097  
|||||  
1101 GCGGCGACGCCAGCGTGAGCGCGAGGGCGCTGGAGCCCTCTTCTTCCGCG 1150  
|||||  
1098 GAGGAGGCGCCAGCGAGAGCGTGAGGGC...GAGGCGGTTTTCTTCCGTG 1144  
|||||  
1151 AAGCCCCAGGGGCCGACTCCTGCACGTGCTTCGTCAACCGCGCGTCGGTG 1200  
|||||  
1145 AAGGTCCTGCGGCTGACCCATGTACCTGCTTTGTCAACCCTGCATCAGTG 1194  
|||||  
1201 CAGGGGTTGGCCGGGGCCTTCGGGGCTGAGCCTGCACCAAGTGGCGGGCCC 1250  
|||||  
1195 CAGGGCTTGGCTGGGGCTTTCCGAGCTGAGCCCACTGCA...GCCGGCCC 1241  
|||||  
1251 CGGGCGCTCAGGGGAGCCGTGTGGCTGTGGCCTCCGGGAGGCGGTGGACG 1300  
|||||  
1242 GGGGCGCTCTGTGGGGCCATGCAGCTGTGGCCTCCGGGAAGCAGTGGATG 1291  
|||||  
1301 GCGTGCGCTTCATCGCAGACCACATGCGGAGCGAGGACGATGACCAGAGC 1350  
|||||  
1292 GCGTACGCTTCATTGCGGACCACATGCGAAGTGAGGATGATGACCAGAGT 1341  
|||||  
1351 GTGAGTGAGGACTGGAAGTACGTGCGCCATGGTGATCGACCGCCTCTTCCT 1400  
|||||  
1342 GTGAGGGAGGACTGGAATACGTTGCCATGGTGATCGACCGCCTGTTTCCT 1391  
|||||

FIG.9b-2

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1401 CTGGATCTTTGTCTTTGTCTGTGTCTTTGGCACCATCGGCATGTTCTGC 1450  
|||||  
1392 GTGGATCTTTGTCTTTGTCTGTGTCTTTGGGACCGTCGGCATGTTCTGC 1441  
|||||  
1451 AGCCTCTCTTCCAGAACTACACCACCACCACCTTCCTCCACTCAGACCAC 1500  
|||||  
1442 AGCCTCTCTTCCAGAACTACACTGCCACTACCTTCCTCCACCCTGACCAC 1491  
|||||  
1501 TCAGCCCCCAGCTCCAAGTGA 1521  
|||||  
1492 TCAGCTCCCAGCTCCAAGTGA 1512

FIG.9c